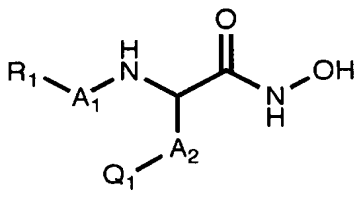
CLAIMS

1. A compound of the following formula (I) or a pharmaceutically acceptable salt thereof:

[Formula 11]



(I)

wherein R_1 represents a hydrogen atom, an alkyl group having 1 to 10 carbon atoms, an alkenyl group having 2 to 10 carbon atoms, an aryl group, a heteroaryl group, or a saturated heterocyclic group;

A_1 and A_2 each independently represent a single bond or an alkylene group having 1 to 6 carbon atoms;

Q_1 represents $-Y_1-A_3-R_2$, an aromatic ring compound group Q_2, a heteroaromatic ring compound group Q_3, or a saturated cyclic compound group Q_4;

Y_1 represents -O-, -S-, $-NR_3-$, $-CONR_3-$, $-NR_3CO-$, $-NR_3COO-$, $-NR_3CONR_4-$, $-NR_3SO_2-$, or $-NR_3SO_2NR_4-$;

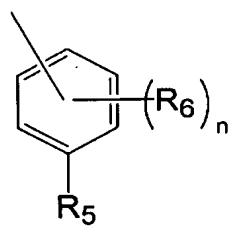
A_3 represents a single bond or an alkylene group having 1 to 6 carbon atoms;

R_2 represents an alkyl group having 1 to 10 carbon atoms, an alkenyl group having 2 to 10 carbon atoms, an aryl group, a heteroaryl group, or a saturated heterocyclic group;

R_3 and R_4 each independently represent a hydrogen atom, an alkyl group, an alkenyl group, an aryl group, a heteroaryl group, a saturated heterocyclic group, or a group selected from the group consisting of an aryl or heteroaryl group and an alkylene group having 1 to 3 carbon atoms; R_2 and R_3 optionally bond together to form a ring;

Q_2 is a group of the following formula (II-a):

[Formula 12]



(II-a)

wherein R_5 represents a nitro group, a cyano group, or $-Y_2-A_3-R_2$;

n represents an integer of 0 to 4;

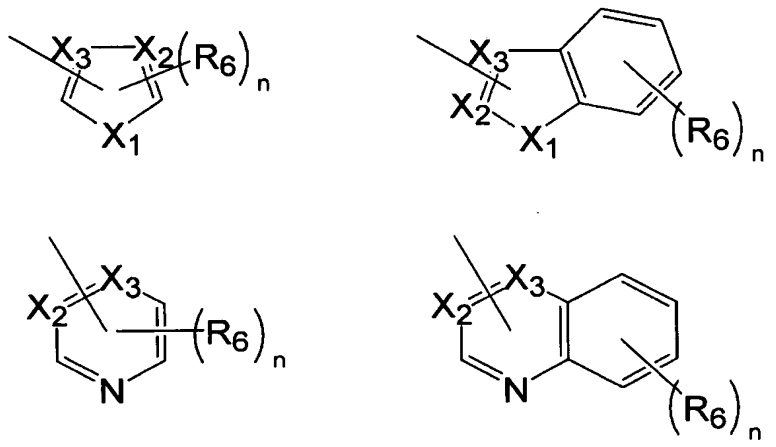
Y_2 represents a single bond, -O-, -S-, -NR_3-, -$CONR_3$-, -NR_3CO-, -NR_3COO-, -NR_3CONR_4-, -NR_3SO_2-, or -$NR_3SO_2NR_4$-;

R_6s are each independently optionally substituted at any carbon atom on the ring, each independently represent a halogen atom, an alkyl group, a nitro group, a cyano group, -OR_7, -$COOR_7$, or -$CONR_7R_8$, and optionally form a ring; and

R_7 and R_8 each independently represent an alkyl group, an alkenyl group, an aryl group, a heteroaryl group, a saturated heterocyclic group, or a group selected from the group consisting of an aryl or heteroaryl group and an alkylene group having 1 to 3 carbon atoms;

Q_3 represents a group selected from groups of the following formula (II-b):

[Formula 13]



(II-b)

wherein X_1 represents -O- or -N(-Y_3-A_3-R_2)-; X_2 and X_3 each represent N or CH; Y_3 represents a single bond -CO- or -SO_2-; and

Q_4 represents a 3- to 10-membered hydrocarbon optionally substituted in any position or a cyclic compound containing 1 to 3 nitrogen, oxygen, or sulfur atoms;

provided that the following cases are excluded in which: R_1 is a hydrogen atom, A_1 is a single bond, A_2 is methylene or ethylene, Q_1 is Q_2, R_5 is Y_2-A_3-R_2, Y_2 is an oxygen atom, A_3 is methylene, and R_2 is phenyl;

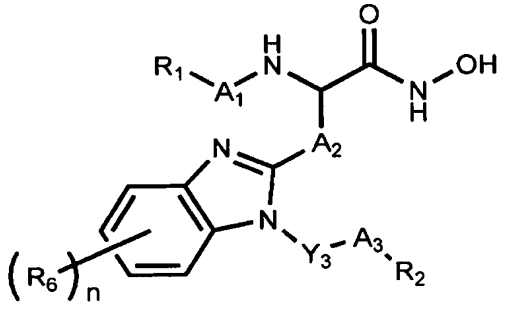
R_1 is a hydrogen atom, A_1 is a single bond, A_2 is methylene, Q_1 is Y_1-A_3-R_2, Y_1 is S, and A_3 is ethylene;

R_1 is a hydrogen atom, A_1 is a single bond, A_2 is ethylene, Q_1 is Y_1-A_3-R_2, Y_1 is S, and A_3 is a single bond, and R_2 is ethyl; and

A_2 is methylene, Q_1 is $-Y_1-A_3-R_2$, Y_1 is NR_3CO, A_3 is ethylene, and R_2 is phenyl.

2. A compound of the following formula (III) or a pharmaceutically acceptable salt thereof:

[Formula 14]



(III)

wherein R_1 represents a hydrogen atom, an alkyl group having 1 to 10 carbon atoms, an alkenyl group having 2 to 10 carbon atoms, an aryl group, a heteroaryl group, or a saturated heterocyclic group;

A_1 and A_2 each independently represent a single bond or an alkylene group having 1 to 6 carbon atoms;

R_6s are each independently optionally substituted at any carbon atom on the ring, each independently represent a halogen atom, an alkyl group, a nitro group, a cyano group, $-OR_7$, $-COOR_7$, or $-CONR_7R_8$, and optionally form a ring;

R_7 and R_8 each independently represent an alkyl group, an alkenyl group, an aryl group, a heteroaryl group, a saturated heterocyclic group, or a group selected from the group consisting of an aryl or heteroaryl group and an alkylene group having 1 to 3 carbon atoms;

n represents an integer of 0 to 4;

Y_3 represents a single bond, -CO- or $-SO_2-$;

A_3 represents a single bond or an alkylene group having 1 to 6 carbon atoms; and

R_2 represents an alkyl group having 1 to 10 carbon atoms, an alkenyl group having 2 to 10 carbon atoms, an aryl group, a heteroaryl group, or a saturated heterocyclic group.

3. The compound of the formula (III) or a pharmaceutically acceptable salt thereof according to claim 2, wherein A_2 represents methylene or ethylene; R_1 represents a hydrogen atom, an alkyl group, or an aryl group; A_1 represents a single bond, methylene,

or ethylene; Y_3 represents a single bond; and R_6 represents a hydrogen atom, a halogen atom, or an alkyl group.

4. The compound of the formula (III) or a pharmaceutically acceptable salt thereof according to claim 3, wherein A_2 represents ethylene; A_1 represents a single bond; and R_1 represents a hydrogen atom.

5. The compound of the formula (III) or a pharmaceutically acceptable salt thereof according to claim 3, wherein R_1 is a hydrogen atom, A_1 is a single bond, A_2 is ethylene, n is 0, Y_3 and A_3 are each a single bond, and R_2 is a propyl group;

R_1 is a hydrogen atom, A_1 is a single bond, A_2 is ethylene, n is 0, Y_3 is a single bond, A_3 is ethylene, and R_2 is a phenyl group;

R_1 is a hydrogen atom, A_1 is a single bond, A_2 is ethylene, n is 0, Y_3 is a single bond, A_3 is methylene, and R_2 is a 4-nitrophenyl group;

R_1 is a hydrogen atom, A_1 is a single bond, A_2 is ethylene, n is 0, Y_3 and A_3 are each a single bond, and R_2 is a pentyl group;

R_1 is a hydrogen atom, A_1 is a single bond, A_2 is ethylene, n is 0, Y_3 is a single bond, A_3 is methylene, and R_2 is a 2-methoxyphenyl group;

R_1 is a hydrogen atom, A_1 is a single bond, A_2 is ethylene, n is 0, Y_3 is a single bond, A_3 is methylene, and R_2 is a pyridin-2-yl group;

R_1 is a hydrogen atom, A_1 is a single bond, A_2 is ethylene, n is 0, Y_3 and A_3 are each a single bond, and R_2 is a butyl group;

R_1 is a hydrogen atom, A_1 is a single bond, A_2 is ethylene, n is 0, Y_3 and A_3 are each a single bond, and R_2 is an octyl group;

R_1 is a hydrogen atom, A_1 is a single bond, A_2 is ethylene, n is 0, Y_3 is a single bond, A_3 is methylene, and R_2 is a cyclohexyl group;

R_1 is a hydrogen atom, A_1 is a single bond, A_2 is ethylene, n is 0, Y_3 and A_3 are each a single bond, and R_2 is a 2,2-dimethylpropyl group;

R_1 is a hydrogen atom, A_1 is a single bond, A_2 is ethylene, n is 0, Y_3 and A_3 are each a single bond, and R_2 is an isobutyl group;

R_1 is a hydrogen atom, A_1 is a single bond, A_2 is ethylene, n is 0, Y_3 is a single bond, A_3 is methylene, and R_2 is a 4-fluorophenyl group;

R_1 is a hydrogen atom, A_1 is a single bond, A_2 is ethylene, n is 0, Y_3 and A_3 are each a single bond, and R_2 is a t-butyl group;

R_1 is a hydrogen atom, A_1 is a single bond, A_2 is ethylene, n is 0, Y_3 and A_3 are each a single bond, and R_2 is a cyclohexyl group;

R_1 is a hydrogen atom, A_1 is a single bond, A_2 is ethylene, n is 0, Y_3 and A_3 are each a single bond, and R_2 is a tetrahydropyran-4-yl group;

R_1 is a hydrogen atom, A_1 is a single bond, A_2 is ethylene, n is 0, Y_3 and A_3 are each a single bond, and R_2 is a 1-methylpiperidin-4-yl group;

R_1 is a hydrogen atom, A_1 is a single bond, A_2 is ethylene, n is 0, Y_3 and A_3 are each a single bond, and R_2 is a 2-methylbutyl group;

R_1 is a hydrogen atom, A_1 is a single bond, A_2 is ethylene, n is 0, Y_3 and A_3 are each a single bond, and R_2 is a hexyl group;

R_1 is a hydrogen atom, A_1 is a single bond, A_2 is ethylene, n is 0, Y_3 and A_3 are each a single bond, and R_2 is a heptyl group;

R_1 is a hydrogen atom, A_1 is a single bond, A_2 is ethylene, n is 0, Y_3 is a single bond, A_3 is 2-methylpropylen-2-yl, and R_2 is a 4-t-butylphenyl group;

R_1 is a hydrogen atom, A_1 is a single bond, A_2 is ethylene, n is 0, Y_3 is a single bond, A_3 is methylene, and R_2 is a naphthalen-1-yl group;

R_1 is a hydrogen atom, A_1 is a single bond, A_2 is ethylene, n is 0, Y_3 is a single bond, A_3 is methylene, and R_2 is a 5-chlorothiophen-2-yl group;

R_1 is a hydrogen atom, A_1 is a single bond, A_2 is ethylene, n is 2, R_6s are methyl groups present at the 5-and 6-positions, Y_3 and A_3 are each a single bond, and R_2 is a cyclohexyl group;

R_1 is a hydrogen atom, A_1 is a single bond, A_2 is ethylene, n is 2, R_6s are methyl groups present at the 5-and 6-positions, Y_3 is a single bond, A_3 is methylene, and R_2 is a 4-t-butylphenyl group;

R_1 is a hydrogen atom, A_1 is a single bond, A_2 is ethylene, n is 2, R_6s are methyl groups present at the 5-and 6-positions, Y_3 is a single bond, A_3 is methylene, and R_2 is a 4-fluorophenyl group;

R_1 is a hydrogen atom, A_1 is a single bond, A_2 is ethylene, n is 2, R_6s are methyl groups present at the 5-and 6-positions, Y_3 is a single bond, A_3 is methylene, and R_2 is a 4-methoxybenzyl group;

R_1 is a hydrogen atom, A_1 is a single bond, A_2 is ethylene, n is 0, Y_3 and A_3 are each a single bond, and R_2 is a methyl group;

R_1 is a propyl group, A_1 is a single bond, A_2 is ethylene, n is 0, Y_3 and A_3 are each a single bond, and R_2 is a propyl group;

R_1 is a cyclohexyl group, A_1 is methylene, A_2 is ethylene, n is 0, Y_3 and A_3 are each a single bond, and R_2 is a methyl group;

R_1 is a propyl group, A_1 is methylene, A_2 is ethylene, n is 0, Y_3 and A_3 are each a single bond, and R_2 is a methyl group;

R_1 is an octyl group, A_1 is methylene, A_2 is ethylene, n is 0, Y_3 and A_3 are each a single bond, and R_2 is a methyl group;

R_1 is a hydrogen atom, A_1 is a single bond, A_2 is ethylene, n is 2, R_6s are methyl groups present at the 5-and 6-positions, Y_3 is a single bond, A_3 is methylene, and R_2 is a propyl group;

R_1 is a hydrogen atom, A_1 is a single bond, A_2 is ethylene, n is 2, R_6s are chlorine atoms present at the 5-and 6-positions, Y_3 is a single bond, A_3 is methylene, and R_2 is a propyl group;

R_1 is a hydrogen atom, A_1 is a single bond, A_2 is ethylene, n is 2, R_6s are chlorine atoms present at the 5-and 6-positions, Y_3 is a single bond, A_3 is methylene, and R_2 is a pentyl group;

R_1 is a cyclohexyl group, A_1 is methylene, A_2 is ethylene, n is 0, Y_3 and A_3 are each a single bond, and R_2 is a propyl group;

R_1 is a hydrogen atom, A_1 is a single bond, A_2 is ethylene, n is 0, Y_3 is a single bond, A_3 is methylene, and R_2 is a 2,3,5,6-tetrafluoro-4-methoxyphenyl group;

R_1 is a hydrogen atom, A_1 is a single bond, A_2 is ethylene, n is 2, R_6s are methyl groups present at the 5-and 6-positions, Y_3 is a single bond, A_3 is methylene, and R_2 is a cyclohexyl group;

R_1 is a hydrogen atom, A_1 is a single bond, A_2 is ethylene, n is 2, R_6s are methyl groups present at the 5-and 6-positions, Y_3 is a single bond, A_3 is methylene, and R_2 is a 3,4-difluorophenyl group;

R_1 is a hydrogen atom, A_1 is a single bond, A_2 is ethylene, n is 0, Y_3 and A_3 are each a single bond, and R_2 is a phenyl group;

R_1 is a hydrogen atom, A_1 is a single bond, A_2 is ethylene, n is 2, R_6s are methyl groups present at the 5-and 6-positions, Y_3 and A_3 are each a single bond, and R_2 is a phenyl group;

R_1 is a hydrogen atom, A_1 is a single bond, A_2 is ethylene, n is 2, R_6s are methyl groups present at the 5-and 6-positions, Y_3 and A_3 are each a single bond, and R_2 is a 4-methylphenyl group;

R_1 is a hydrogen atom, A_1 is a single bond, A_2 is ethylene, n is 2, R_6s are methyl groups present at the 5-and 6-positions, Y_3 and A_3 are each a single bond, and R_2 is a 4-methoxyphenyl group;

R_1 is a hydrogen atom, A_1 is a single bond, A_2 is ethylene, n is 2, R_6s are methyl groups present at the 5-and 6-positions, Y_3 and A_3 are each a single bond, and R_2 is a 4-fluorophenyl group;

R_1 is a hydrogen atom, A_1 is a single bond, A_2 is ethylene, n is 0, Y_3 and A_3 are each a single bond, and R_2 is a 4-methylphenyl group;

R_1 is a hydrogen atom, A_1 is a single bond, A_2 is ethylene, n is 2, R_6s are methyl groups present at the 5-and 6-positions, Y_3 is a single bond, A_3 is methylene, and R_2 is a 3-fluorophenyl group;

R_1 is a hydrogen atom, A_1 is a single bond, A_2 is ethylene, n is 2, R_6s are methyl groups present at the 5-and 6-positions, Y_3 and A_3 are each a single bond, and R_2 is a 3-nitrophenyl group;

R_1 is a hydrogen atom, A_1 is a single bond, A_2 is ethylene, n is 2, R_6s are methyl groups present at the 5-and 6-positions, Y_3 is a single bond, A_3 is methylene, and R_2 is a 4-trifluoromethylphenyl group;

R_1 is a hydrogen atom, A_1 is a single bond, A_2 is ethylene, n is 2, R_6s are chlorine atoms present at the 5-and 6-positions, Y_3 and A_3 are each a single bond, and R_2 is a phenyl group;

R_1 is a hydrogen atom, A_1 is a single bond, A_2 is ethylene, n is 2, R_6s are chlorine atoms present at the 5-and 6-positions, Y_3 is a single bond, A_3 is methylene, and R_2 is a phenyl group;

R_1 is a hydrogen atom, A_1 is a single bond, A_2 is methylene, n is 0, Y_3 and A_3 are each a single bond, and R_2 is a pentyl group;

R_1 is a hydrogen atom, A_1 is a single bond, A_2 is methylene, n is 0, Y_3 and A_3 are each a single bond, and R_2 is a 4-methylphenyl group;

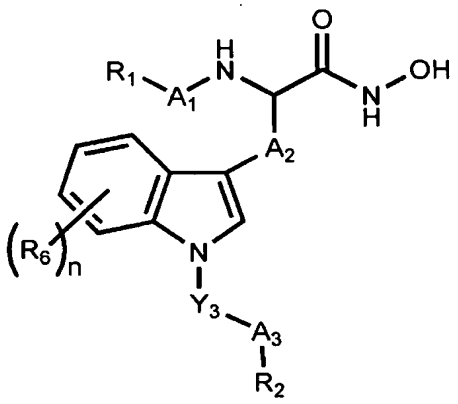
R_1 is a hydrogen atom, A_1 is a single bond, A_2 is methylene, n is 0, Y_3 is a single bond, A_3 is methylene, and R_2 is a 4-t-butylphenyl group;

R_1 is a hydrogen atom, A_1 is a single bond, A_2 is ethylene, n is 2, R_6s are methyl groups present at the 5-and 6-positions, Y_3 and A_3 are each a single bond, and R_2 is a pentyl group; or

R_1 is a hydrogen atom, A_1 is a single bond, A_2 is ethylene, n is 2, R_6s are methyl groups present at the 5-and 6-positions, Y_3 and A_3 are each a single bond, and R_2 is a 2,2-dimethylpropyl group.

6. A compound of the following formula (IV) or a pharmaceutically acceptable salt thereof:

[Formula 15]



(IV)

wherein R_1 represents a hydrogen atom, an alkyl group having 1 to 10 carbon atoms, an alkenyl group having 2 to 10 carbon atoms, an aryl group, a heteroaryl group, or a saturated heterocyclic group;

A_1 and A_2 each independently represent a single bond or an alkylene group having 1 to 6 carbon atoms;

R_6s are each independently optionally substituted at any carbon atom on the ring, each independently represent a halogen atom, an alkyl group, a nitro group, a cyano group, $-OR_7$, $-COOR_7$, or $-CONR_7R_8$, and optionally form a ring;

R_7 and R_8 each independently represent an alkyl group, an alkenyl group, an aryl group, a heteroaryl group, a saturated heterocyclic group, or a group selected from the group consisting of an aryl or heteroaryl group and an alkylene group having 1 to 3 carbon atoms;

n represents an integer of 0 to 4; Y_3 represents a single bond -CO- or $-SO_2-$; and

A_3 represents a single bond or an alkylene group having 1 to 6 carbon atoms; and R_2 represents an alkyl group having 1 to 10 carbon atoms, an alkenyl group having 2 to 10 carbon atoms, an aryl group, a heteroaryl group, or a saturated heterocyclic group.

7. The compound of the formula (IV) or a pharmaceutically acceptable salt thereof according to claim 6, wherein R_6 represents a hydrogen atom.

8. The compound of the formula (IV) or a pharmaceutically acceptable salt thereof according to claim 7, wherein R_1 represents a hydrogen atom and A_1 represents a single bond.

9. The compound of the formula (IV) or a pharmaceutically acceptable salt thereof according to claim 8, wherein Y_3 represents a single bond.

10. The compound of the formula (IV) or a pharmaceutically acceptable salt thereof according to claim 6, wherein R_1 is a hydrogen atom, A_1 is a single bond, A_2 is methylene, n is 0, Y_3 is a single bond, A_3 is methylene, and R_2 is a 2,4-difluorophenyl group;

R_1 is a hydrogen atom, A_1 is a single bond, A_2 is methylene, n is 0, Y_3 is a single bond, A_3 is methylene, and R_2 is a 4-trifluorophenyl group;

R_1 is a hydrogen atom, A_1 is a single bond, A_2 is methylene, n is 0, Y_3 is a single bond, A_3 is methylene, and R_2 is a 4-nitrophenyl group;

R_1 is a hydrogen atom, A_1 is a single bond, A_2 is methylene, n is 0, Y_3 is a single bond, A_3 is ethylene, and R_2 is a phenyl group;

R_1 is a hydrogen atom, A_1 is a single bond, A_2 is methylene, n is 0, Y_3 is a single bond, A_3 is methylene, and R_2 is a 2,3,4,5,6-pentafluorophenyl group;

R_1 is a hydrogen atom, A_1 is a single bond, A_2 is methylene, n is 0, Y_3 and A_3 are each a single bond, and R_2 is a pentyl group;

R_1 is a hydrogen atom, A_1 is a single bond, A_2 is methylene, n is 0, Y_3 is a single bond, A_3 is methylene, and R_2 is a 4-t-butylphenyl group;

R_1 is a hydrogen atom, A_1 is a single bond, A_2 is methylene, n is 0, Y_3 is a single bond, A_3 is methylene, and R_2 is a 4-cyanophenyl group;

R_1 is a hydrogen atom, A_1 is a single bond, A_2 is methylene, n is 0, Y_3 is a single bond, A_3 is methylene, and R_2 is a 3,4-difluorophenyl group;

R_1 is a hydrogen atom, A_1 is a single bond, A_2 is methylene, n is 0, Y_3 and A_3 are each a single bond, and R_2 is a methyl group;

R_1 is a hydrogen atom, A_1 is a single bond, A_2 is methylene, n is 0, Y_3 and A_3 are each a single bond, and R_2 is an ethyl group;

R_1 is a hydrogen atom, A_1 is a single bond, A_2 is methylene, n is 0, Y_3 and A_3 are each a single bond, and R_2 is a propyl group;

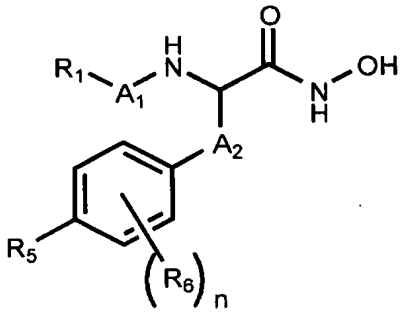
R_1 is a hydrogen atom, A_1 is a single bond, A_2 is methylene, n is 0, Y_3 and A_3 are each a single bond, and R_2 is a butyl group;

R_1 is a hydrogen atom, A_1 is a single bond, A_2 is methylene, n is 0, Y_3 and A_3 are each a single bond, and R_2 is a hexyl group; or

R_1 is a hydrogen atom, A_1 is a single bond, A_2 is methylene, n is 0, Y_3 and A_3 are each a single bond, and R_2 is a 3-methylbutyl group.

11. A compound of the following formula (V) or a pharmaceutically acceptable salt thereof:

[Formula 16]



(V)

wherein R_1 represents a hydrogen atom, an alkyl group having 1 to 10 carbon atoms, an alkenyl group having 2 to 10 carbon atoms, an aryl group, a heteroaryl group, or a saturated heterocyclic group; A_1 and A_2 each independently represent a single bond or an alkylene group having 1 to 6 carbon atoms; R_5 represents a nitro group, a cyano group, or -Y_2-A_3-R_2; n represents an integer of 0 to 4; Y_2 represents a single bond, -O-, -S-, -NR_3-, -$CONR_3$-, -NR_3CO-, -NR_3COO-, -NR_3CONR_4-, -NR_3SO_2-, or -$NR_3SO_2NR_4$-;

R_6s are each independently optionally substituted at any carbon atom on the ring, each independently represent a halogen atom, an alkyl group, a nitro group, a cyano group, -OR_7, -$COOR_7$, or -$CONR_7R_8$, and optionally form a ring; and

R_7 and R_8 each independently represent an alkyl group, an alkenyl group, an aryl group, a heteroaryl group, a saturated heterocyclic group, or a group selected from the group consisting of an aryl or heteroaryl group and an alkylene group having 1 to 3 carbon atoms.

12. The compound of the formula (V) or a pharmaceutically acceptable salt thereof according to claim 11, wherein A_2 represents methylene and R_6 represents a hydrogen atom.

13. The compound of the formula (V) or a pharmaceutically acceptable salt thereof according to claim 12, wherein R_1 represents a hydrogen atom, A_1 represents a single bond, R_5 represents a nitro group, $-NR_9R_{10}$, or $-OR_9$, R_9 and R_{10} each represent $-Y_4-R_{11}$, Y_4 represents a single bond, -CO-, -COO-, $-CONR_{12}-$, or SO_2-, and R_{11} and R_{12} each independently represent an alkyl group having 1 to 10 carbon atoms, an aryl group, a heteroaryl group, a saturated heterocyclic group, or a group selected from the group consisting of an aryl or heteroaryl group and an alkylene group having 1 to 3 carbon atoms, provided that the following cases are excluded in which: R_5 represents $-OR_9$, R_9 represents $-Y_4R_{11}$, and Y_4 represents 0; or R_{11} represents a benzyl group.

14. The compound of the formula (V) or a pharmaceutically acceptable salt thereof according to claim 12, wherein R_5 is a nitro group.

15. The compound of the formula (V) or a pharmaceutically acceptable salt thereof according to claim 11, wherein R_1 is a hydrogen atom, A_1 is a single bond, A_2 is methylene, n is 0, R_5 is $-Y_2-A_3-R_2$, Y_2 is $-NR_3CO-$, R_3 is a hydrogen atom, A_3 is a single bond, and R_2 is a methyl group;

R_1 is a hydrogen atom, A_1 is a single bond, A_2 is methylene, n is 0, R_5 is $-Y_2-A_3-R_2$, Y_2 is $-NR_3CO-$, R_3 is a hydrogen atom, A_3 is a single bond, and R_2 is a 4-methylphenyl group;

R_1 is a hydrogen atom, A_1 is a single bond, A_2 is methylene, n is 0, R_5 is $-Y_2-A_3-R_2$, Y_2 is $-NR_3CO-$, R_3 is a hydrogen atom, A_3 is a single bond, and R_2 is a butyl group;

R_1 is a hydrogen atom, A_1 is a single bond, A_2 is methylene, n is 0, R_5 is $-Y_2-A_3-R_2$, Y_2 is $-NR_3CO-$, R_3 is a hydrogen atom, A_3 is a single bond, and R_2 is a t-butyl group;

R_1 is a hydrogen atom, A_1 is a single bond, A_2 is methylene, n is 0, R_5 is $-Y_2-A_3-R_2$, Y_2 is $-NR_3CO-$, R_3 is a hydrogen atom, A_3 is methylene, and R_2 is a 4-fluorophenyl group;

R_1 is a hydrogen atom, A_1 is a single bond, A_2 is methylene, n is 0, R_5 is $-Y_2-A_3-R_2$, Y_2 is $-NR_3SO_2-$, R_3 is a hydrogen atom, A_3 is a single bond, and R_2 is a 4-methylphenyl group;

R_1 is a hydrogen atom, A_1 is a single bond, A_2 is methylene, n is 0, R_5 is $-Y_2-A_3-R_2$, Y_2 is $-NR_3CONR_4-$, R_3 and R_4 are each a hydrogen atom, A_3 is a single bond, and R_2 is a 4-trifluoromethylphenyl group;

R_1 is a hydrogen atom, A_1 is a single bond, A_2 is methylene, n is 0, R_5 is $-Y_2-A_3-R_2$, Y_2 is $-NR_3COO-$, R_3 is a hydrogen atom, A_3 is a single bond, and R_2 is a methyl group;

R_1 is a hydrogen atom, A_1 is a single bond, A_2 is methylene, n is 0, R_5 is $-Y_2-A_3-R_2$, Y_2 is $-NR_3CONR_4-$, R_3 is a hydrogen atom, A_3 is a single bond, and R_2 and R_4 are each a methyl group;

R_1 is a hydrogen atom, A_1 is a single bond, A_2 is methylene, n is 0, R_5 is $-Y_2-A_3-R_2$, Y_2 is $-NR_3-$, A_3 is a single bond, and R_2 and R_3 are each a propyl group;

R_1 is a hydrogen atom, A_1 is a single bond, A_2 is methylene, n is 0, R_5 is $-Y_2-A_3-R_2$, Y_2 is $-NR_3-$, A_3 is methylene, R_2 is a hydrogen atom, and R_3 is a 4-methylphenyl group;

R_1 is a hydrogen atom, A_1 is a single bond, A_2 is methylene, n is 0, and R_5 is a nitro group;

R_1 is a phenyl group, A_1 is methylene, A_2 is methylene, n is 0, and R_5 is a nitro group;

R_1 is a pyridin-2-yl group, A_1 is methylene, A_2 is methylene, n is 0, and R_5 is a nitro group;

R_1 is a propyl group, A_1 is a single bond, A_2 is methylene, n is 0, and R_5 is a nitro group;

R_1 is a cyclohexyl group, A_1 is methylene, A_2 is methylene, n is 0, and R_5 is a nitro group;

R_1 is a 2-propyl group, A_1 is a single bond, A_2 is methylene, n is 0, and R_5 is a nitro group;

R_1 is a cyclohexyl group, A_1 is a single bond, A_2 is methylene, n is 0, and R_5 is a nitro group;

R_1 is a 1-methylpiperazin-4-yl group, A_1 is a single bond, A_2 is methylene, n is 0, and R_5 is a nitro group;

R_1 is a hydrogen atom, A_1 is a single bond, A_2 is methylene, n is 0, and R_5 is $-Y_2-A_3-R_2$, Y_2 is -O-, A_3 is ethylene, and R_2 is a 4-phenyl group;

R_1 is a hydrogen atom, A_1 is a single bond, A_2 is methylene, n is 0, and R_5 is $-Y_2-A_3-R_2$, Y_2 is -O-, A_3 is a single bond, and R_2 is a propyl group;

R_1 is a hydrogen atom, A_1 is a single bond, A_2 is methylene, n is 0, and R_5 is $-Y_2-A_3-R_2$, Y_2 is -O-, A_3 is ethylene, and R_5 is a morpholin-4-yl group;

R_1 is a hydrogen atom, A_1 is a single bond, A_2 is methylene, n is 0, and R_5 is -Y_2-A_3-R_2, Y_2 is -O-, A_3 is a single bond, and R_2 is a butyl group;

R_1 is a hydrogen atom, A_1 is a single bond, A_2 is methylene, n is 0, and R_5 is -Y_2-A_3-R_2, Y_2 is -O-, A_3 is a single bond, and R_2 is a pentyl group;

R_1 is a hydrogen atom, A_1 is a single bond, A_2 is methylene, n is 0, and R_5 is -Y_2-A_3-R_2, Y_2 is -O-, A_3 is methylene, and R_2 is a 4-fluorophenyl group;

R_1 is a hydrogen atom, A_1 is a single bond, A_2 is methylene, n is 0, and R_5 is -Y_2-A_3-R_2, Y_2 is -O-, A_3 is methylene, and R_2 is a naphthalen-2-yl group;

R_1 is a hydrogen atom, A_1 is a single bond, A_2 is methylene, n is 0, and R_5 is -Y_2-A_3-R_2, Y_2 is -O-, A_3 is methylene, and R_2 is a 2-chlorophenyl group;

R_1 is a hydrogen atom, A_1 is a single bond, A_2 is methylene, n is 0, and R_5 is -Y_2-A_3-R_2, Y_2 is -O-, A_3 is methylene, and R_2 is a 4-trifluoromethylphenyl group;

R_1 is a hydrogen atom, A_1 is a single bond, A_2 is methylene, n is 0, and R_5 is -Y_2-A_3-R_2, Y_2 is -O-, A_3 is methylene, and R_2 is a 2,3,4,5,6-pentafluorophenyl group;

R_1 is a hydrogen atom, A_1 is a single bond, A_2 is methylene, n is 0, and R_5 is -Y_2-A_3-R_2, Y_2 is -O-, A_3 is methylene, and R_2 is a 4-t-butylphenyl group;

R_1 is a hydrogen atom, A_1 is a single bond, A_2 is methylene, n is 0, and R_5 is -Y_2-A_3-R_2, Y_2 is -O-, A_3 is methylene, and R_2 is a 2-biphenyl group;

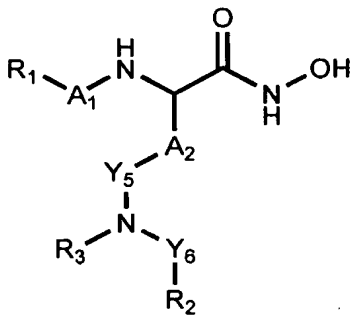
R_1 is a hydrogen atom, A_1 is a single bond, A_2 is methylene, n is 0, and R_5 is -Y_2-A_3-R_2, Y_2 is -O-, A_3 is methylene, and R_2 is a 4-nitrophenyl group;

R_1 is a hydrogen atom, A_1 is a single bond, A_2 is methylene, n is 0, and R_5 is -Y_2-A_3-R_2, Y_2 is -O-, A_3 is methylene, and R_2 is a 2,4-difluorophenyl group; or

R_1 is a hydrogen atom, A_1 is a single bond, A_2 is methylene, n is 0, and R_5 is -Y_2-A_3-R_2, Y_2 is -O-, A_3 is methylene, and R_2 is a 4-cyanophenyl group.

16. A compound of the following formula (VI) or a pharmaceutically acceptable salt thereof:

[Formula 17]



(VI)

wherein R_1 represents a hydrogen atom, an alkyl group having 1 to 10 carbon atoms, an alkenyl group having 2 to 10 carbon atoms, an aryl group, a heteroaryl group, or a saturated heterocyclic group;

A_1 and A_2 each independently represent a single bond or an alkylene group having 1 to 6 carbon atoms;

R_2 represents an alkyl group having 1 to 10 carbon atoms, an alkenyl group having 2 to 10 carbon atoms, an aryl group, a heteroaryl group, or a saturated heterocyclic group;

Y_5 represents a single bond or a carbonyl group; Y_6 represents a single bond, -CO-, -COO-, -$CONR_4$-, or -SO_2-; and

R_3 and R_4 each represent a hydrogen atom, an alkyl group, an alkenyl group, an aryl group, a heteroaryl group, a saturated heterocyclic group, or a group selected from the group consisting of an aryl or heteroaryl group and an alkylene group having 1 to 3 carbon atoms.

17. The compound of the formula (VI) or a pharmaceutically acceptable salt thereof according to claim 16, wherein A_2 represents ethylene or propylene.

18. The compound of the formula (VI) or a pharmaceutically acceptable salt thereof according to claim 17, wherein R_1 represents a hydrogen atom and A_1 represents a single bond.

19. The compound of the formula (VI) or a pharmaceutically acceptable salt thereof according to claim 16, wherein R_1 is a hydrogen atom, A_1 is a single bond, A_2 is ethylene, Y_5 is a carbonyl group, Y_6 is a single bond, R_3 is a hydrogen atom, and R_2 is a naphthalen-1-ylmethyl group;

R_1 is a hydrogen atom, A_1 is a single bond, A_2 is ethylene, Y_5 is a carbonyl group, Y_6 is a single bond, R_3 is a hydrogen atom, and R_2 is a 4-t-butylphenyl group;

R_1 is a hydrogen atom, A_1 is a single bond, A_2 is ethylene, Y_5 is a carbonyl group, Y_6 is a single bond, R_3 is a hydrogen atom, and R_2 is a 4-fluorobenzyl group;

R_1 is a hydrogen atom, A_1 is a single bond, A_2 is ethylene, Y_5 is a carbonyl group, Y_6 is a single bond, R_3 is a hydrogen atom, and R_2 is a 4-t-butylbenzyl group;

R_1 is a hydrogen atom, A_1 is a single bond, A_2 is ethylene, Y_5 is a carbonyl group, Y_6 is a single bond, R_3 is a hydrogen atom, and R_2 is a cyclohexyl group;

R_1 is a hydrogen atom, A_1 is a single bond, A_2 is ethylene, Y_5 is a carbonyl group, Y_6 is a single bond, R_3 is a hydrogen atom, and R_2 is a 2,2-diphenylethyl group;

R_1 is a hydrogen atom, A_1 is a single bond, A_2 is ethylene, Y_5 is a carbonyl group, Y_6 is a single bond, R_3 is a hydrogen atom, and R_2 is a pyridin-2-ylmethyl group;

R_1 is a hydrogen atom, A_1 is a single bond, A_2 is ethylene, Y_5 is a carbonyl group, Y_6 is a single bond, R_3 is a methyl group, and R_2 is a benzyl group;

R_1 is a hydrogen atom, A_1 is a single bond, A_2 is ethylene, Y_5 is a carbonyl group, Y_6 is a single bond, R_3 is an ethyl group, and R_2 is an ethyl group;

R_1 is a hydrogen atom, A_1 is a single bond, A_2 is ethylene, Y_5 is a carbonyl group, Y_6 is a single bond, and R_2 and R_3 are each a pentylene group and form a ring;

R_1 is a hydrogen atom, A_1 is a single bond, A_2 is ethylene, Y_5 is a carbonyl group, Y_6 is a single bond, R_3 is a hydrogen atom, and R_2 is an adamantan-1-yl group;

R_1 is a hydrogen atom, A_1 is a single bond, A_2 is ethylene, Y_5 is a carbonyl group, Y_6 is a single bond, R_3 is a hydrogen atom, and R_2 is a benzyl group;

R_1 is a hydrogen atom, A_1 is a single bond, A_2 is propylene, Y_5 is a single bond, Y_6 is -CO-, R_3 is a hydrogen atom, and R_2 is a methyl group;

R_1 is a hydrogen atom, A_1 is a single bond, A_2 is propylene, Y_5 is a single bond, Y_6 is -CO-, R_3 is a hydrogen atom, and R_2 is a phenyl group;

R_1 is a hydrogen atom, A_1 is a single bond, A_2 is propylene, Y_5 is a single bond, Y_6 is -CO-, R_3 is a hydrogen atom, and R_2 is a 4-nitrophenyl group;

R_1 is a hydrogen atom, A_1 is a single bond, A_2 is propylene, Y_5 is a single bond, Y_6 is -CO-, R_3 is a hydrogen atom, and R_2 is a 4-nitrobenzyl group;

R_1 is a hydrogen atom, A_1 is a single bond, A_2 is propylene, Y_5 is a single bond, Y_6 is -CO-, R_3 is a hydrogen atom, and R_2 is a naphthalen-1-yl group;

R_1 is a hydrogen atom, A_1 is a single bond, A_2 is propylene, Y_5 is a single bond, Y_6 is -CO-, R_3 is a hydrogen atom, and R_2 is a naphthalen-2-yl group;

R_1 is a hydrogen atom, A_1 is a single bond, A_2 is propylene, Y_5 is a single bond, Y_6 is -CO-, R_3 is a hydrogen atom, and R_2 is a cyclohexylmethyl group;

R_1 is a hydrogen atom, A_1 is a single bond, A_2 is propylene, Y_5 is a single bond, Y_6 is -CO-, R_3 is a hydrogen atom, and R_2 is a 4-chlorophenyl group;

R_1 is a hydrogen atom, A_1 is a single bond, A_2 is propylene, Y_5 is a single bond, Y_6 is -CO-, R_3 is a hydrogen atom, and R_2 is a benzhydryl group;

R_1 is a hydrogen atom, A_1 is a single bond, A_2 is propylene, Y_5 is a single bond, Y_6 is -CO-, R_3 is a hydrogen atom, and R_2 is a 2-phenylbenzyl group;

R_1 is a hydrogen atom, A_1 is a single bond, A_2 is propylene, Y_5 is a single bond, Y_6 is -CO-, R_3 is a hydrogen atom, and R_2 is a 3,5-di-t-butylbenzyl group;

R_1 is a hydrogen atom, A_1 is a single bond, A_2 is propylene, Y_5 is a single bond, Y_6 is -CO-, R_3 is a hydrogen atom, and R_2 is a t-butyl group;

R_1 is a hydrogen atom, A_1 is a single bond, A_2 is propylene, Y_5 is a single bond, Y_6 is a single bond, R_3 is a propyl group, and R_2 is a propyl group;

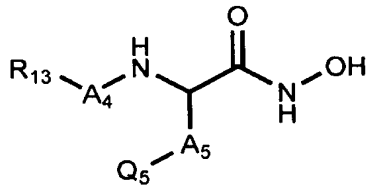
R_1 is a hydrogen atom, A_1 is a single bond, A_2 is propylene, Y_5 is a single bond, Y_6 is a single bond, R_3 is a pentyl group, and R_2 is a pentyl group;

R_1 is a hydrogen atom, A_1 is a single bond, A_2 is propylene, Y_5 is a single bond, Y_6 is a single bond, R_3 is a hydrogen atom, and R_2 is a cyclohexyl group; or

R_1 is a hydrogen atom, A_1 is a single bond, A_2 is propylene, Y_5 is a single bond, Y_6 is a single bond, R_3 is a 4-methylbenzyl group, and R_2 is a 4-methylbenzyl group.

20. An AGE generation inhibitor comprising a compound of the following formula (VII) or a pharmaceutically acceptable salt thereof:

[Formula 18]



(VII)

wherein R_{13} represents an alkyl group having 1 to 10 carbon atoms, an aryl group, a heteroaryl group, or a saturated heterocyclic group;

A_4 and A_5 each independently represent a single bond or an alkylene group having 1 to 6 carbon atoms;

Q_5 represents $-Y_7-A_6-R_{14}$, an aromatic ring compound group Q_6, a heteroaromatic ring compound group Q_7, or a saturated cyclic compound group Q_8;

Y_7 represents a single bond, -O-, -S-, $-NR_{15}-$, $-CONR_{15}-$, $-NR_{15}CO-$, $-NR_{15}COO-$, $-NR_{15}CONR_{16}-$, $-NR_{15}SO_2-$, or $-NR_{15}SO_2NR_{16}-$;

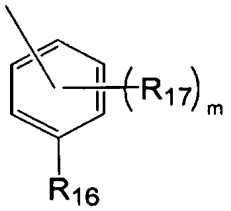
A_6 represents a single bond or an alkylene group having 1 to 6 carbon atoms;

R_{14} represents a hydrogen atom, an alkyl group having 1 to 10 carbon atoms, an aryl group, a heteroaryl group, or a saturated heterocyclic group;

R_{15} and R_{16} each represent an alkyl group having 1 to 6 carbon atoms , an aryl group, a heteroaryl group, a saturated heterocyclic group, or a group selected from the group consisting of an aryl or heteroaryl group and an alkylene group having 1 to 3 carbon atoms; R_{14} and R_{15} optionally bond together to form a ring;

Q_6 is a group of the following formula (VIII-a):

[Formula 19]



(VIII-a)

wherein R_{16} represents a hydrogen atom, a halogen atom, a nitro group, a cyano group, or $-Y_7-A_6-R_{14}$;

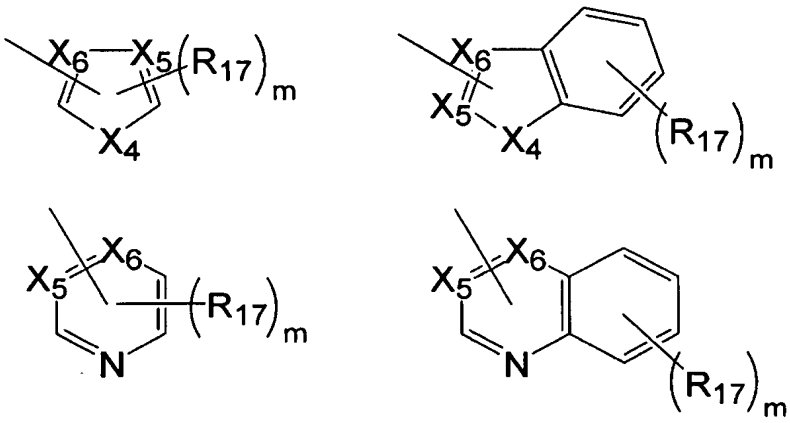
m represents an integer of 0 to 4;

R_{17} may be each independently substituted at any atom on the ring, each independently represents a halogen atom, an alkyl group, a nitro group, a cyano group, $-OR_{18}$, $-COOR_{18}$, or $-CONR_{18}R_{19}$, and optionally form a ring; and

R_{18} and R_{19} each represent an alkyl group having 1 to 6 carbon atoms, an aryl group, a heteroaryl group, a saturated heterocyclic group;

Q_7 is any of groups of the following formula (VIII-b):

[Formula 20]



(VIII-b)

wherein X_4 represents -O-, -S-, or -N(-Y_7-A_6-R_{14})-; X_5 and X_6 each represent N or CH; and

Q_8 represents a 3- to 10-membered hydrocarbon optionally substituted in any position or a cyclic compound group which can contain 1 to 3 nitrogen, oxygen, and/or sulfur atoms.

21. A medicinal composition comprising the AGE generation inhibitor according to claim 20.

22. A food additive composition comprising the AGE generation inhibitor according to claim 20.

23. A cosmetic additive composition comprising the AGE generation inhibitor according to claim 20.

24. A cosmetic comprising the AGE generation inhibitor according to claim 20.